REMARKS

The present Amendment amends claims 11-15, 22 and 23, and leaves claims 1-10 and 16-21 unchanged. Therefore, the present application has pending claims 1-23.

35 U.S.C. §112 Rejections

Claims 1, 6 and 16 stand rejected under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the written description requirement. Specifically, the Examiner alleges that the claims contain subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

This rejection of claims 1, 6 and 16 is traversed for the following reasons. Applicants submit that the features of claims 1, 6 and 16 are described in the specification at page 3, line 31 to page 4, line 1 and at page 4, lines 12-25. Therefore, 1, 6 and 16 comply with the requirements of 35 U.S.C. §112, first paragraph, and this rejection should be withdrawn.

35 U.S.C. §101 Rejections

Claims 2, 4, 6 and 9 stand rejected under 35 USC §101 as allegedly being directed to non-statutory subject matter. Specifically, the Examiner alleges that the "means" as recited in claims 2, 4, 6 and 9 is software, per se, rather than a hardware component of the search system.

Regarding dependent claims 2 and 4, this rejection is traversed for the following reasons. Applicants submit that claims 2 and 4 are dependent on claim 1, and the Examiner is reminded that dependent claims are intended to further limit their base claims, as well as to inherit the features of their base claims. As

such, claims 2 and 4 inherit the statutory features of claim 1. Claim 1 recites a system, where features of the claimed system are ***necessarily*** implemented in hardware. Therefore, the system of independent claim 1 and the further limited systems of dependent claims 2 and 4 are not merely directed to software, per se. Accordingly, claims 2 and 4 contain tangible subject matter and are statutory under 35 U.S.C. §101.

Regarding claims 6 and 9, it is noted that independent claim 6 recites several different "means". Therefore, it is unclear as to which "means" the Examiner alleges renders the claim non-statutory. Nonetheless, Applicants submit that claim 1 recites a search server for mediating between a search client and a plurality of document databases, where features of the claimed search server are ***necessarily*** implemented in hardware. Therefore the search server of independent claim 6 and the further limited search server of dependent claim 9 are not merely directed to software, per se. Accordingly, claims 6 and 9 contain tangible subject matter and are statutory under 35 U.S.C. §101.

Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Claim Objections

Claims 1, 6, 10-16 and 21-23 are objected to due to informalities noted by the Examiner in paragraph 8 of the Office Action. Specifically, the Examiner contends that the meaning of "i", "j" and "x" should be spelled out or indicated clearly in the claim language.

Applicants traverse this objection for the following reasons. As clearly recited in independent claims 6 and 16, "i" is modified by the descriptive term "document database" to describe a first database referred to as a "document

database i". Similarly, "j" is modified by the descriptive term "document database" to describe a second database referred to as a "document database j". Furthermore, "x" is modified by the descriptive term "number of times", which refers to the number of times (i.e., "x") that the document database j is searched based on the search results generated from the previous searches of the document database i.

However, where appropriate, amendments were made to claims 11, 12, 14, 15, 22, and 23 to correct any additional informalities noted by the Examiner. Therefore, this objection is overcome and should be withdrawn.

35 U.S.C. §102 Rejections

Claims 1-3, 6-18 and 21-23 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,454,105 to Hatakeyama, et al. ("Hatakeyama"). These rejections are traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1-3, 6-18 and 21-23 are not taught or suggested by Hatakeyama, whether taken individually or in combination with the other references of record. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

Amendments were made to each of the claims so as to more clearly describe features of the present invention. Specifically, amendments were made to the claims so as to more clearly recite that the present invention is directed to a document search system, a search server for mediating between a search client and a plurality of document databases, and a document search method for instructing a document search as recited, for example, in independent claims 1, 6 and 16.

The present invention, as recited in claim 1 and as similarly recited in claims 6 and 16, provides an associate server that is capable of instructing a document search by specifying a document database j to be searched next among a plurality of document databases, based on a search result generated from a previous search of a document database i. Further, according to the present invention, an associate search recording table is provided which records the number of times x_{ij} of searching the document database j based on the search results generated from the previous searches of the document database i.

Thus, as per the features of the present invention, for example, as described in the passage of the present application beginning on page 8, line 32 through page 10, line 10, the associate search recording table stores therein information for tracking the number of times of searching a second database based on the search results generated from the previously conducted search of a first database. Therefore, the present invention is intended to address a situation wherein the order of document databases to be searched next is determined using the tracking information stored in the associative search recording table regarding searches conducted in databases that are searched prior to searching the next database.

For example, according to the present invention, a search for a particular type of document is set using a keyword and the search is conducted in a first database which retrieves documents related to the keyword. Thereafter the documents retrieved are used to search a second database with good results. Next, the associative search recording table records (tracking) information so as to indicate the number of searches that are performed using the first database and then the second database. According to the present invention, such tracking

information being stored in the associative search recording table is used by an associative server when conducting a search to specify the next database within which a search is to be performed. This tracking information stored in the associative search recording table improves the results of the searching operation relative to conventional systems. This feature of the present invention also allows for the appropriate calculation of fees for the use of the databases where certain databases are more useful in searching when combined with other databases. All of the above described features of the present invention are not taught or suggested by Hatakeyama whether taken individually or in combination any of the other references of record.

Hatakeyama discloses a document information search method and system. However, there is not teaching or suggestion in Hatakeyama of the document search system, the search server for mediating between a search client and a plurality of document databases, or the document search method for instructing a document search as recited in independent claims 1, 6 and 16.

Hatakeyama teaches a document information search method and system that reduces the wait time in the event that a plurality of search requests are sent to a search device simultaneously by executing the multiple search requests simultaneously — namely in parallel. In Hatakeyama's method and system, when a search request is received in the course of executing a search processing for an earlier prior search request, the former is stored in a queue buffer. When a plurality of search requests has been stored in a queue buffer in this manner, a search processing is performed for the plurality of search requests simultaneously as stored. The results of search processing as performed are then output to the relevant search request sources, respectively. Output buffers

for storing a set of search results of the searches performed in the past may be provided in correspondence to the search request sources, respectively, for screening the documents for which the character string search is to be performed.

One feature of the present invention, as recited in claim 1 and as similarly recited in claims 6 and 16, includes an associate server that is capable of instructing a document search by specifying a document database j to be searched next among a plurality of document databases, based on a search result generated from a previous search of a document database i. Hatakeyama does not disclose this feature. To support the assertion that Hatakeyama teaches this feature, the Examiner cites Figs. 4 and 5, the abstract, and column 6, lines 8-67. However, neither the cited text nor any other portions of Hatakeyama teach or suggest an associative server, as claimed. For example, as described in the abstract and as shown in Fig. 15, Hatakeyama teaches that when a plurality of search requests have been stored in a queue buffer, a search processing is performed simultaneously for the plurality of search requests, as stored. There is no disclosure of a performing a document search by specifying a document database j to be searched next from among a plurality of document databases, based on a search result generated from a previous search of a document i, in the manner claimed.

Another feature of the present invention, as recited in claim 1 and as similarly recited in claims 6 and 16, includes an associate search recording table that records the number of times x_{ij} of searching the document database j based on the search results generated from the previous searches of the document database i. Hatakeyama does not disclose this feature. To support the assertion

that Hatakeyama teaches this feature, the Examiner cites Fig. 17, column 17, lines 10-28, column 1, lines 12-20, Fig. 22, and column 19, lines 47-60. However, neither the cited text nor any other portions of Hatakeyama teach or suggest an associative search recording table, as claimed.

The table as taught by Hatakeyama is a correspondence table indicating which database is stored in which server and which document has been hit by which search word. Thus, there is absolutely no teaching or suggestion in Hatakeyama of the associative search recording table as recited in the claims wherein tracking information is stored indicating the number of times of searching a second database based on the search results generated from the previous searches of a first database and wherein the tracking information is used for selecting the next database within which to perform a search after searching in a preceding database as in the present invention.

Thus, the table illustrated in Fig. 4 of Hatakeyama is simply a table for recording which documents have been hit by which keyword. Therefore, this table as taught by Hatakeyama does not anticipate nor render obvious the features of the present invention as now more clearly recited in the claims regarding the associative search recording table.

Further, in Hatakeyama, col. 19, lines 47-60 simply teaches the above described correspondence table which indicates which database is located in which server. Thus, this teaching of Hatakeyama does not anticipate nor render obvious the features of the present invention as recited in the claims regarding the associative search recording table.

Still further, Hatakeyama teaches in col. 17, lines 40-55 a hierarchical search wherein a beginning search is subsequently refined so as to conduct sub-

searches. This teaching of Hatakeyama does not anticipate nor render obvious the features of the present invention as recited in the claims wherein the associative search recording table is provided. According to the present invention, the associative search recording table is provided so as to allow for the associative server to select which of the document databases are to be searched next due to the results of searching generated from the previous searches of the document databases.

Hatakeyama also teaches in col. 2, lines 62-67 and in col. 3, lines 1-10 a method of processing a plurality of search requests at once by putting the search request in a queue. However, as is quite clear from the above, the present invention is not directed to organizing search requests in a queue but is instead directed to setting the order in which databases are to be searched based upon tracking information as to how the databases are used as a result of previously performed searches. Such features are clearly not taught or suggested by Hatakeyama.

Fig. 17 of Hatakeyama shows a result set management table for storing a number of bit lists that correspond to the number times a search has been performed. A row of document IDs in a set of the search results is represented as a search result bit list where "1"s are placed at positions for the document IDs for which documents are hit, while "0"s are placed at positions of the document IDs for which no documents are hit. This is quite different from the associative search recording table of the present invention.

Therefore, Hatakeyama fails to teach or suggest "an associative server which is capable of instructing a document search by specifying a document database j to be searched next among a plurality of databases based on a

search result generated from a previous search of a document database i" as recited in claim 1, and as similarly recited in claims 6 and 16.

Furthermore, Hatakeyama fails to teach or suggest "an associative search recording table which records the number of times x_{ij} of searching the document database j based on the search results generated from the previous search of the document database i" as recited in claim 1, and as similarly recited in claims 6 and 16.

Therefore, Hatakeyama does not teach or suggest the features of the present invention as recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §102(b) rejection of claims 1-3, 6-9, 10-15, 16-18 and 21 as being anticipated by Hatakeyama is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references used in the rejection of claims 1-3, 6-18 and 21-23.

35 U.S.C. §103 Rejections

Claims 4, 5, 9, 19, and 20 stand rejected under 35 USC §103(a) as being unpatentable over Hatakeyama in view of U.S. Patent No. 6,018,733 to Kirsch, et al. ("Kirsch"). This rejection is traversed for the following reasons. Claims 4 and 5 are dependent on claim 1, claim 9 is dependent on claim 6, and claims 19 and 20 are dependent on claim 16. Therefore, claims 4, 5, 9, 19, and 20 are allowable for at least the same reasons as previously discussed regarding independent claims 1, 6 and 16.

Accordingly, reconsideration and withdrawal of the 35 USC §103(a) rejection of claims 4, 5, 9, 19 and 20 as being unpatentable over Hatakeyama in view of Kirsch are respectfully requested.

In view of the foregoing amendments and remarks, applicants submit that claims 1-23 are in condition for allowance. Accordingly, early allowance of claims 1-23 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (referencing attorney Docket No. 1021.40599X00).

Respectfully submitted,

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